

REMARKS

Applicants thank the Examiner for the very thorough consideration given the present application.

Claims 1 and 3-28 are now present in this application. Claims 12-28 are added. Claims 1, 8, 12, 16 and 22 are independent. Claims 1, 6 and 8 have been amended. Claim 2 has been canceled. No new matter is involved.

Claim 1 has been amended by adding some subject matter from claim 2 (which has been canceled) along with the feature of a shaft extending entirely through the ball bearing, and claim 6 has been amended. Basis for the recitation that the shaft extends entirely through the ball bearing is found, for example, in FIG. 5, which clearly shows this feature. In this regard, Applicants point out that it has been held that drawings alone constitute proper disclosure even if what is shown in the drawings is accidental. See Ex parte Prybil, 156 USPQ 64 (Bd. Pat. App 1967). Moreover, such disclosure is available for all that it teaches one of ordinary skill in the art. See In re Meng and Driessen, 181 USPQ 94 (CCPA 1974) and In re Aslanian, 200 USPQ 500 (CCPA 1979). Claim 8 has been re-written in independent form to include some of the features found in claims 1, 2 and 6.

DRAWING CHANGES

Applicants thank the Examiner for accepting the amended drawings filed on October 3, 2005.

REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claims 1-11 stand rejected under 35 U.S.C. § 112, second paragraph, for omitting essential elements, such omissions amounting to a gap between the elements, citing MPEP §2172.01. Applicants respectfully traverse this rejection.

The Office Action asserts that the omitted elements are the elements of the rear hinge that provide the claimed functions, and the elements of the front hinge that rotatably support the front of the drum.

Applicants respectfully disagree with this assertion for a number of reasons.

Firstly, claims are considered to be definite, as required by the second paragraph of 35 U.S.C. § 112, when they define the metes and bounds of a claimed invention with a reasonable degree of precision and particularity. See In re Venezia, 530 F.2d 956, 958, 189 USPQ 149, 151 (CCPA 1976). In that case the court did not require Venezia's claims to recite his elements as being interconnected. Applicant's claims recite a slot feature structure, and only need to recite those elements which distinguish the invention from the prior

art. The definiteness of claim language is analyzed, not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing ordinary skill in the pertinent art, In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). Furthermore, the Applicants may use functional language, alternative expressions, negative limitations, or any style of expression or format of claim which makes clear the boundaries of the subject matter for which protection is sought. See in this regard, In re Swinehart, 439 F.2d 210, 160 226 (CCPA 1971).

The recitation in the claims of the various recited elements is clear, and one of ordinary skill in the art can readily determine the metes and bounds of the invention without any further recitations.

The test for compliance with the second paragraph of 35 U.S.C. § 112, as stated in Miles Lab., Inc. v. Shandon Inc., 997 F.2d 870, 875, 27 USPQ2d 1123, 1126 (Fed. Cir. 1993), cert. denied, 510 U.S. 1100 (1994) is whether one skilled in the art would understand the bounds of the claims when read in light of the specification. If the claims, read in light of the specification, reasonably apprise those skilled in the art of the scope of the invention, Section 112 demands no more. See, also, In re Merat, 519 F.2d 1390, 1396, 186 USPQ 471, 476 (CCPA 1975), which stated that the question under Section 112, second paragraph is whether the claim language, when read by a person of

ordinary skill in the art in light of the specification, describes the subject matter with sufficient precision that the bonds of the claimed subject matter are distinct. See, also, In re Warmerdam, 33 F3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994).

The second paragraph of 35 U.S.C. § 112 requires claims to be set out and circumscribe a particular area with a reasonable degree of precision and particularity, In re Johnson, 558 F.2d 1008, 1015, 194 USPQ 187, 193 (CCPA 1977).

All of Applicants' claims satisfy these requirements.

Moreover, the case cited in MPEP §2172.01 (on which this rejection is based) to require inclusion of essential structural cooperative relationships, In re Mayhew, 188 USPQ 356 (CCPA 1976), has been severely limited by the decisions of the Federal Circuit regarding the very similar Gentry Gallery case, cited below.

This Application is unlike the application in Gentry Gallery, Inc. v. Berkline Corp., 43 USPQ2d 1498 (Fed. Cir. 1998) in which the court's determination that the patent disclosure did not support a broad meaning for the disputed claim was premised on clear statements in the written description that described the location of a claim element - the "control means" - as "the only possible location" and that variations were "outside the stated purpose of the invention", *Id.* at 1503. The Federal Circuit subsequently held, in Johnson

Worldwide Associates Inc. v. Zebco Corp., 50 USPQ2d 1607 (Fed. Cir. 1999) that Gentry Gallery considers the situation where the patent's disclosure makes it crystal clear that a particular (i.e., narrow) understanding of a claim term is an "essential element of [the inventor's] invention." Applicants submit that this decision also limited the applicability of the In re Mayhew decision.

In this regard, Applicants' disclosure ~~never~~ states, or otherwise admits, that any particular feature is an essential element of the invention. Absent such an admission, there is no statutory basis to make the requirements set forth in this rejection under 35 U.S.C. § 112. Accordingly, this rejection of claims 1-11 is improper and should be withdrawn.

Applicants respectfully submit that this rejection improperly equates claim scope with indefiniteness and amending the claims to include additional features of the front hinge and the rear hinge will not clarify the metes and bounds of the claims, which are clear already.

Reconsideration and withdrawal of this rejection of claims 1-11 are respectfully requested.

Claims 1-11 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. This rejection is respectfully traversed.

The Office Action asserts that it is unclear (1) how the ball bearing is swinging in the vertical and horizontal directions, (2) what point, relative to the

ball bearing, is the bearing swinging about, (2) is it moving relative to the housing, and (4) what structural elements allow for the ball to swing.

Applicants respectfully disagree for a number of reasons.

Firstly, as noted above, Applicants respectfully submit that the test for compliance with the second paragraph of 35 USC 112, as stated in Miles Lab., Inc. v. Shandon Inc., 997 F.2d 870, 875, 27 USPQ2d 1123, 1126 (Fed. Cir. 1993), cert. denied, 510 U.S. 1100 (1994) is whether one skilled in the art would understand the bounds of the claims when read in light of the specification. If the claims, read in light of the specification, reasonably apprise those skilled in the art of the scope of the invention, Section 112 demands no more. See, also, In re Merat, 519 F.2d 1390, 1396, 186 USPQ 471, 476 (CCPA 1975), which stated that the question under Section 112, second paragraph is whether the claim language, when read by a person of ordinary skill in the art in light of the specification, describes the subject matter with sufficient precision that the bounds of the claimed subject matter are distinct. See, also, In re Warmerdam, 33 F3d 1354, 1361, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). Moreover, this claim recites "substantially." Use of that term in a claim does not render the claim indefinite if the specification provides a standard whereby one of ordinary skill in the art would understand what is claimed when the claim is read in light of the specification, Seattle Box

Co., Inc. v. Industrial Coating and Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 573-4 (Fed. Cir. 1984).

In light of the aforementioned fundamental principles of U.S. patent case law, Applicants respectfully submit that the metes and bounds of claims 1-11 are clear as they stands and there is no need to explain how the ball bearing swings in the vertical and horizontal directions. All of the allegedly unclear aspects of the claimed invention go to the adequacy of the disclosure, not to whether the claims are clear and definite, and the Office Action does not argue that the disclosure is inadequate, because it is adequate.

Moreover, Applicants respectfully submit that one of ordinary skill in the art can answer all of the questions on which this rejection is based with reference to Applicants' specification and drawings, as originally filed.

Reconsideration and withdrawal of this rejection of claims 1-11 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-10 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,483,756 to Heyder. This rejection is respectfully traversed.

Anticipation under 35 U.S.C. § 102(b) requires that "each and every element as set forth in the claim is found, either expressly or inherently

described, in a single prior art reference." Verdegaal Bros., Inc. v. Union Oil Co., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987).

If the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if that element is "inherent" in its disclosure. To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Id.* at 1269, 20 USPQ2d at 1749 (quoting In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (C.C.P.A. 1981).

Claim 1, as amended, positively recites a combination of features, including a ball bearing and a shaft extending entirely through the ball bearing. Heyder fails to disclose the claimed combination of elements. For example, Heyder's shaft extends only partly inside of its ball bearing.

Further, claim 6 recites an empty gap between the second housing and the case, a feature not disclosed by Heyder.

Furthermore, with respect to claim 7, Heyder does not appear to have a base nut provided at an inner surface of the case. The only nut disclosed in Heyder is hex nut 4, which is provided at an outer surface of the case. The

unlabeled element between hex nut 4 and ball bearing 5 may be a coupling, but is not a nut.

Furthermore, with respect to claim 8, a disc shape is a thin circular or round flat plate shape, and the unlabeled element, e.g., coupling, between hex nut 4 and ball bearing 5 most certainly does not have a thin circular or round flat plate type shape. Nor is the single fastening part or contact pin guide 22 a plurality of engaging portions formed at a certain interval in a circumferential direction of the base nut.

Furthermore, with respect to claim 10, element 23 in Heyder is a contact pin, to establish galvanic contact with housing parts – see col. 4, lines 1-17, and not to stop any stopping protrusion, a feature which is also not disclosed by Heyder. In this regard, element 22 in Heyder is not a stopping protrusion. Rather, it is merely an electrical contact pin guide, as disclosed in col. 4, lines 11-17.

Accordingly, the Office Action fails to make out a *prima facie* case of anticipation of claims 1-10 under 35 U.S.C. § 102(b) by Heyder.

Reconsideration and withdrawal of this rejection of claims 1-10 are respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claim 11 stands rejected under 35 USC §103(a) as unpatentable over Heyder in view of U.S. Patent 5,963,432 to Crowley. This rejection is respectfully traversed.

Because the rejection is based on 35 U.S.C. §103, what is in issue in such a rejection is "the invention as a whole," not just a few features of the claimed invention. Under 35 U.S.C. §103, "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." The determination under §103 is whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. See In re O'Farrell, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). In determining obviousness, the invention must be considered as a whole and the claims must be considered in their entirety. See Medtronic, Inc. v. Cardiac Pacemakers, Inc., 721 F.2d 1563, 1567, 220 USPQ 97, 101 (Fed. Cir. 1983).

In rejecting claims under 35 U.S.C. § 103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. E-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-

84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

A showing of a suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” *C.R. Bard, Inc. v. M3 Sys. Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See *In re Dembiczak*, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

Moreover, it is well settled that the Office must provide objective evidence of the basis used in a prior art rejection. A factual inquiry whether to modify a reference must be based on objective evidence of record, not merely conclusory statements of the Examiner. See, *In re Lee*, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

Furthermore, during patent examination, the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745

F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). If the PTO fails to meet this burden, then the Applicant is entitled to the patent. Only when a *prima facie* case is made, the burden shifts to the applicant to come forward to rebut such a case.

Initially, Applicants respectfully submit that claim 11 depends from claims 8 and 9 and that the subject matter of claim 11 is not disclosed by Heyder at least for the reasons stated above regarding the traversal of the rejection of those claims over Heyder. Moreover, Crowley is not applied to remedy the deficiencies in Heyder. Accordingly, even if one of ordinary skill in the art were properly motivated to modify Heyder in view of Crowley to substitute a weld or a rivet for Heyder's nut 4, the resulting modified version of Heyder would not render the claimed invention obvious.

Moreover, the Office Action does not provide objective factual evidence that the teaching of equivalence of a threaded rod and nut, adhesive, rivet or clamp in the printed circuit board standoff art would motivate one of ordinary skill in the art to substitute a rivet or a weld for the hex nut-bearing journal arrangement of Heyder, especially where the bearing journal of Heyder is threaded and doing away with it would do away with this fundamental feature of Heyder's invention would probably make Heyder's clothes dryer inoperative.

Accordingly, the Office Action fails to make out a *prima facie* case of obviousness of claim 11 under 35 U.S.C. § 103(a) by Heyder in view of Crowley.

Reconsideration and withdrawal of this rejection of claim 11 are respectfully requested.

NEW CLAIMS 12-28

The present invention according to new claim 12 comprises a housing fixed at a rear center portion of a drum, a ball bearing inserted into the housing, a shaft connected with the ball bearing and fixed at a rear portion of a case, and a shaft fixing unit to prevent a slip of the shaft in assembly of the hinge assembly. Claim 16 recites similar features, being slightly broader in scope regarding where the shape is connected.

Furthermore, the present invention according to new claim 13 comprises a base nut member having a plurality of engaging protrusions, and a reinforcing member having a stopping pin to stop the engaging protrusions in assembly of the hinge assembly.

In the present invention, the stopping pin of the reinforcing member is passed through the insertion groove formed at the case, and stops the engaging protrusions of the base nut member, so that the base nut member is prevented from being rotated. Accordingly, it is very easy to assemble a nut to the spiral formed portion of the shaft because a slip of the shaft is not generated by the stopping of the engaging protrusions (refer to Figs. 4 and 5).

Support for the new claims is found throughout Applicants' originally

filed disclosure, including Figs. 4-8. The “curvedly” feature of claim 27 is shown, for example, in Fig. 8.

However, the configurations taught in U.S. Patent No. 5,483,756 to Heyder are very different from the teachings disclosed in the presently claimed invention because the cited reference does not show a shaft fixing unit that prevents shaft slip, for example, or a base nut member and a reinforcing member. Further, the advantageous effect of the presently claimed invention cannot be obtained from the constructions of the cited reference.

Also, the present invention according to new claim 22 recites a combination of features, including coupling a shaft fixing member to a spiral-formed portion provided at the end of the shaft, and inserting the end of the shaft into the case so as to fix the shaft into the case; stopping the shaft fixing member; and coupling a nut to the end portion of the shaft, whereby rotation of the shaft is prevented by the shaft fixing member.

However, the applied Heyder reference does not teach or suggest the recited combination of features.

In view of the foregoing, the cited reference fails to anticipate or render obvious the presently claimed invention as recited in new claims 12, 16 and 22, and therefore independent claims 12, 16 and 22 are in condition for allowance. Further, dependent claims 13-15, 17-21 and 23-28 are believed to be allowance because of their dependency from the independent claims 12, 16

and 22 which are Novel and unobvious over the applied Heyder reference, as described above.

ADDITIONAL CITED REFERENCES

Because the remaining references cited by the Examiner have not been utilized to reject the claims, but have merely been cited to show the state of the art, no comment need be made with respect thereto.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Robert J. Webster, Registration No. 46,472, at (703) 205-8000, in the Washington, D.C. area.

Prompt and favorable consideration of this Amendment is respectfully requested.

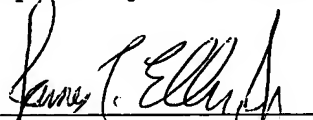
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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 

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